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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PATRICK REINHOLD, JURGEN KROGMEIER,
and JOHANNES BOKE

Appeal 2008-6271
Application 10/726,817
Technology Center 1700

Decided: January 29, 2009

Before ADRIENE LEPIANE HANLON, TERRY J. OWENS, and
KAREN M. HASTINGS, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 9-13, which are all of the pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

The Invention

The Appellants claim an apparatus for heat treating a steel workpiece. Claim 9 is illustrative:

9. An apparatus for heat-treating a steel workpiece, the apparatus comprising:

a longitudinally extending furnace;

a longitudinally extending partition subdividing an interior of the furnace into two longitudinally extending and transversely adjacent zones;

means for heating one of the zones to a substantially higher treatment temperature than the other of the zones; and

transport means for conveying the workpiece longitudinally through the furnace generally parallel to the partition with a region of the workpiece moving exclusively through the one zone and another region of the workpiece moving exclusively through the other of the zones such that the regions are heated to different temperatures.

The References

Harsch	1,949,716	Mar. 6, 1934

Metals Handbook - Volume 1, Properties and Selection: Irons, Steels, and High-Performance Alloys 190 (ASM International, 10th ed. 1990).

The Rejection

Claims 9-13 stand rejected under 35 U.S.C. § 103 over Harsch in view of the Metals Handbook.

OPINION

We reverse the Examiner's rejection. We need to address only the sole independent claim, i.e., claim 9.

Issue

Have the Appellants shown reversible error in the Examiner's determination that the applied references would have rendered prima facie obvious, to one of ordinary skill in the art, an apparatus comprising a

transport means capable of conveying a workpiece longitudinally through a furnace generally parallel to a longitudinally extending partition that subdivides an interior of the furnace into two longitudinally extending transversely adjacent zones, such that a region of the workpiece moves exclusively through one zone and another region of the workpiece moves exclusively through the other zone such that the regions are heated to different temperatures?

Findings of Fact

Harsch discloses an apparatus for heat treating metal objects, comprising a furnace through which the objects move while being heated (p. 1, ll. 1-3, 65-66, 75-78). The objects are heated by hot air blown across them by fans (11, 11a) positioned above and/or below the objects (p. 1, ll. 83-89, 97-104; p. 2, ll. 49-71; Fig. 1). The furnace's "work heating chamber may be divided, as by suitable baffles, into zones of definitely different temperature, with at least one fan in each zone, or the baffles may be omitted so that the zones merge, the temperature progressively increasing toward the furnace outlet" (p. 1, ll. 14-19; p. 3, ll. 69-77). The temperatures within the zones can be individually controlled (p. 3, ll. 93-107). The fans circulate the air such that within each zone, the objects are uniformly heated across each of their cross-sections (p. 1, ll. 4-10, 97-102; p. 2, ll. 82-89; p. 3, ll. 79-83; 121-126; Figs. 2, 5). In the embodiment shown in Figure 9, the furnace comprises combustion chambers (34) having longitudinally extending walls (35) (p. 3, ll. 129-135). Objects inside the walls are heated by radiation from gas combustion outside the walls. *See id.*

The Examiner relies upon the Metals Handbook (p. 190) for a suggestion to make Harsch's metal objects out of steel (Ans. 4).

Analysis

The Appellants argue that Harsch does not disclose longitudinally extending zones through which respective regions of the objects move (Br. 6; Reply Br. 2). The Appellants argue that in Harsch's embodiment having longitudinally extending combustion chamber walls (Fig. 9), respective regions of the objects cannot be heated to different temperatures because no portion of the conveyor or object extends outside the walls to the combustion region (Br. 7-8).

The Examiner argues (Ans. 4):

> With respect to the recitation "with a region of the workpiece moving exclusively through the one zone and another region of the workpiece moving exclusively through the other of the zones such that the regions are heated to different temperatures", the Examiner asserts that the claims are directed toward an apparatus and not a method. Furthermore, because the apparatus disclosed by Harsch ('716) would have all of the components required by the instant claim, the apparatus disclosed by Harsch ('716) would be capable of performing the same process. MPEP 2112.01 I.

That argument is not well taken because the Examiner has not established that Harsch discloses structure capable of moving regions of a workpiece exclusively through different zones such that the regions are heated to different temperatures.

The Examiner argues that because the temperatures in Harsch's zones can be individually controlled, Harsch's apparatus is capable of heat treating objects non-uniformly (Ans. 6).

Although Harsch's zones can be individually temperature controlled, within each zone the objects are heated uniformly over all of their cross-sections (p. 1, ll. 4-10, 97-102; p. 3, ll. 121-126). The Examiner does not explain, and it is not apparent, how Harsch's apparatus is capable of moving regions of the workpieces exclusively through different zones such that the regions are heated to different temperatures.

The Examiner argues that "the longitudinally extending gap limitation and the division of the heating chamber could be met by the presence of baffles and/or trays that extend the length of the heating chamber within the furnace with the plate that supports the lower lift (page 1, lines 78-82, page 2, lines 121-137 and Figure 9), thereby eliminating the need to eliminate the cross-wise partitions 25 and 25a" (Ans. 7).

As stated in *KSR Int'l. Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007), "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR*, 127 S. Ct. at 1741, quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

The Examiner has not provided the required articulated reasoning with rational underpinning. Instead, the Examiner has merely set forth a conclusory statement that Harsch's apparatus could be modified by adding baffles and/or trays such that different regions of a workpiece move exclusively through different zones such that they are heated to different temperatures as required by the Appellants' claims. Thus, the record indicates that the Examiner's reason for modifying the prior art to arrive at

the claimed invention comes from the Appellants' disclosure rather than coming from the applied prior art. Hence, the record indicates that the Examiner used impermissible hindsight in rejecting the Appellants' claims. *See In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967), *cert. denied*, 389 U.S. 1057 (1968) ("A rejection based on section 103 clearly must rest on a factual basis, and these facts must be interpreted without hindsight reconstruction of the invention from the prior art").

Conclusion of Law

The Appellants have shown reversible error in the Examiner's determination that the applied references would have rendered prima facie obvious, to one of ordinary skill in the art, an apparatus comprising a transport means capable of conveying a workpiece longitudinally through a furnace generally parallel to a longitudinally extending partition that subdivides an interior of the furnace into two longitudinally extending transversely adjacent zones, such that a region of the workpiece moves exclusively through one zone and another region of the workpiece moves exclusively through the other zone such that the regions are heated to different temperatures.

DECISION/ORDER

The rejection of claims 9-13 under 35 U.S.C. § 103 over Harsch in view of the Metals Handbook is reversed.

It is ordered that the Examiner's decision is reversed.

REVERSED

PL Initial;
sld

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